

NEWS 28 Jul 22 INPADOC: Basic index (/BI) enhanced; Simultaneous Left and Right Truncation available  
 NEWS 29 AUG 05 New pricing for EUROPATFULL and PCTFULL effective August 1, 2003  
 NEWS 30 AUG 13 Field Availability (/FA) field enhanced in BEILSTEIN  
 NEWS 31 AUG 15 PATDPAFULL: one FREE connect hour, per account, in September 2003  
 NEWS 32 AUG 15 PCTGEN: one FREE connect hour, per account, in September 2003  
 NEWS 33 AUG 15 RDISCLOSURE: one FREE connect hour, per account, in September 2003  
 NEWS 34 AUG 15 TEMA: one FREE connect hour, per account, in September 2003  
 NEWS 35 AUG 18 Data available for download as a PDF in RDISCLOSURE  
 NEWS 36 AUG 18 Simultaneous left and right truncation added to PASCAL  
 NEWS 37 AUG 18 FROSTI and KOSMET enhanced with Simultaneous Left and Right Truncation  
 NEWS 38 AUG 18 Simultaneous left and right truncation added to ANABSTR  
  
 NEWS EXPRESS April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003  
 NEWS HOURS STN Operating Hours Plus Help Desk Availability  
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\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 19:02:13 ON 25 AUG 2003

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 19:02:19 ON 25 AUG 2003

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STRUCTURE FILE UPDATES: 24 AUG 2003 HIGHEST RN 572107-42-7  
 DICTIONARY FILE UPDATES: 24 AUG 2003 HIGHEST RN 572107-42-7

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

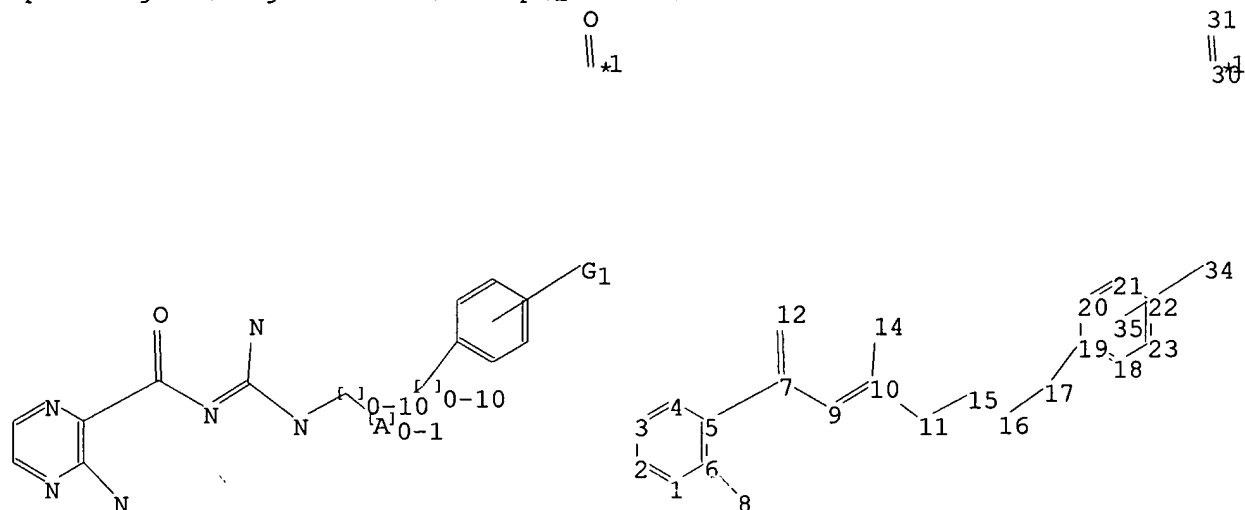
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:

<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=>

Uploading C:\Program Files\Stnexp\Queries\10076571.str



chain nodes :

7 8 9 10 11 12 14 15 16 17 30 31 34

ring nodes :

1 2 3 4 5 6 18 19 20 21 22 23

chain bonds :

5-7 6-8 7-9 7-12 9-10 10-11 10-14 11-15 15-16 16-17 17-19 30-31

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 18-19 18-23 19-20 20-21 21-22 22-23

exact/norm bonds :

6-8 7-9 7-12 9-10 10-11 10-14 11-15 15-16 16-17 30-31

exact bonds :

5-7 17-19

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 18-19 18-23 19-20 20-21 21-22 22-23

isolated ring systems :

containing 1 :

G1:O,CH2,[\*1]

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS  
11:CLASS 12:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:Atom 19:Atom  
20:Atom 21:Atom 22:Atom 23:Atom 30:CLASS 31:CLASS 34:CLASS 35:CLASS

L1 STRUCTURE UPLOADED

=> s l1

SAMPLE SEARCH INITIATED 19:02:39 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 8 TO ITERATE

100.0% PROCESSED 8 ITERATIONS

3 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*

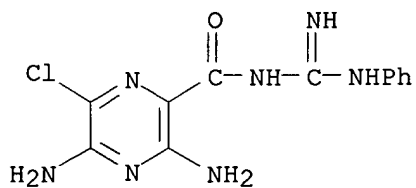
PROJECTED ITERATIONS: 8 TO 329

PROJECTED ANSWERS: 3 TO 163

L2 3 SEA SSS SAM L1

=> d scan

L2 3 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN  
IN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[imino(phenylamino)methyl]-  
(9CI)  
MF C12 H12 Cl N7 O  
CI COM

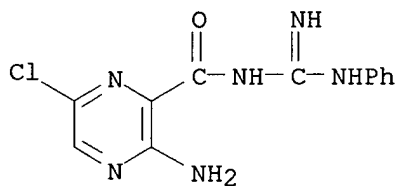


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):2

10/076,571 Thomas McKenzie

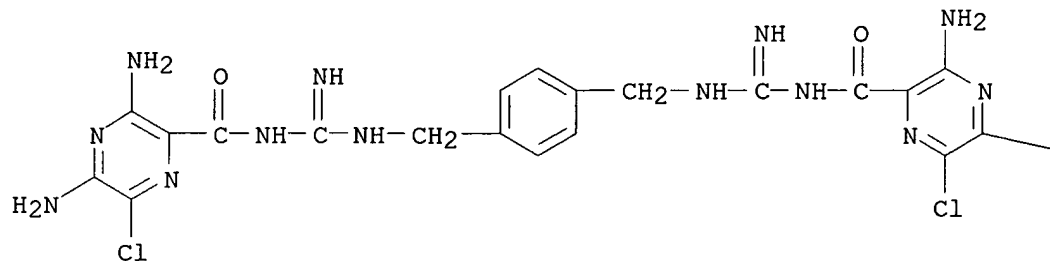
L2 3 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN  
IN Pyrazinecarboxamide, 3-amino-6-chloro-N-[imino(phenylamino)methyl]- (9CI)  
MF C12 H11 Cl N6 O



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

L2 3 ANSWERS REGISTRY COPYRIGHT 2003 ACS on STN  
IN Pyrazinecarboxamide, N,N'-[1,4-phenylenebis(methyleneiminocarbonimidoyl)]b  
is[3,5-diamino-6-chloro-, dihydrobromide (9CI)  
MF C20 H22 Cl2 N14 O2 . 2 Br H

PAGE 1-A



● 2 HBr

PAGE 1-B

NH2

ALL ANSWERS HAVE BEEN SCANNED

=> s l1 full

FULL SEARCH INITIATED 19:03:13 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 235 TO ITERATE

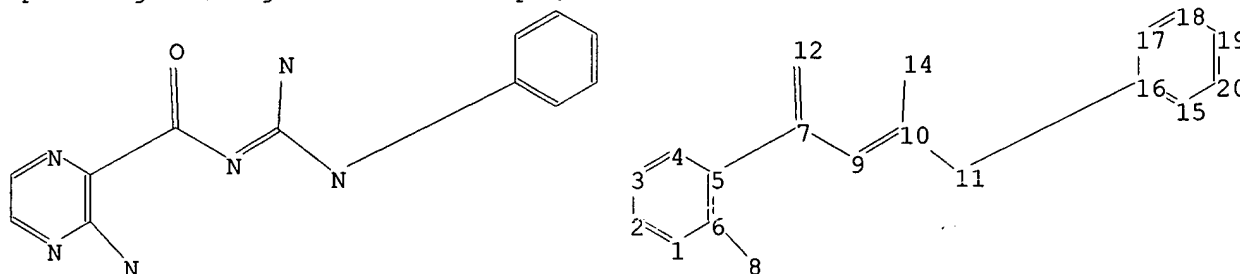
100.0% PROCESSED 235 ITERATIONS  
SEARCH TIME: 00.00.01

83 ANSWERS

L3 83 SEA SSS FUL L1

=>

Uploading C:\Program Files\Stnexp\Queries\10076571a.str



chain nodes :

7 8 9 10 11 12 14

ring nodes :

1 2 3 4 5 6 15 16 17 18 19 20

chain bonds :

5-7 6-8 7-9 7-12 9-10 10-11 10-14 11-16

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 15-16 15-20 16-17 17-18 18-19 19-20

exact/norm bonds :

6-8 7-9 7-12 9-10 10-11 10-14 11-16

exact bonds :

5-7

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 15-16 15-20 16-17 17-18 18-19 19-20

isolated ring systems :

containing 1 :

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS  
11:CLASS 12:CLASS 14:CLASS 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom 20:Atom

L4 STRUCTURE UPLOADED

=> s l4 subset = l3 full

FULL SUBSET SEARCH INITIATED 19:04:29 FILE 'REGISTRY'  
FULL SUBSET SCREEN SEARCH COMPLETED - 83 TO ITERATE

100.0% PROCESSED 83 ITERATIONS

17 ANSWERS

10/076,571 Thomas McKenzie

SEARCH TIME: 00.00.01

L5 17 SEA SUB=L3 SSS FUL L4

=> s l3 not l5

L6 66 L3 NOT L5

=> file caold

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

184.25

184.46

FILE 'CAOLD' ENTERED AT 19:04:47 ON 25 AUG 2003

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FILE COVERS 1907-1966

FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> s l6

L7 3 L6

=> d 1-3 bib hitstr



L7 ANSWER 1 OF 3 CAOLD COPYRIGHT 2003 ACS on STN

AN CA64:6668d CAOLD

TI pyrazinoylguanidines

PA Merck & Co., Inc.

DT Patent

PATENT NO.	KIND	DATE
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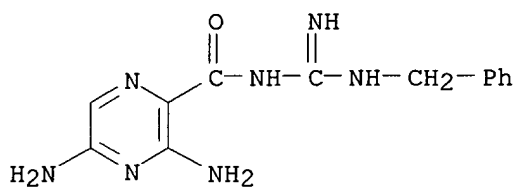
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	BE 653481	
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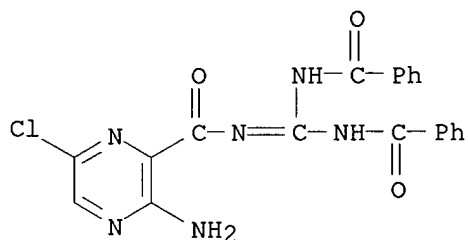
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RN	5873-99-4 CAOLD	
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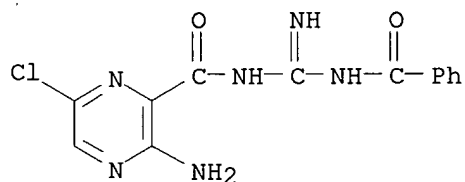
CN	Pyrazinecarboxamide, 3,5-diamino-N-[imino[(phenylmethyl)amino]methyl]- (9CI) (CA INDEX NAME)	
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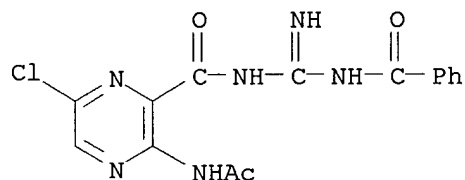
L7 ANSWER 2 OF 3 CAOLD COPYRIGHT 2003 ACS on STN  
 AN CA63:11561e CAOLD  
 TI pyrazine diuretics - (I) N-amidino-3-amino-6-halopyrazinecarboxamides  
 AU Bicking, John B.; Mason, J. W.; Woltersdorf, O. W., Jr.; Jones, J. H.;  
 Kwong, S. F.; Robb, C. M.; Cragoe, E. J., Jr.  
 IT **3367-38-2** **3377-39-7** **3377-42-2**  
**3377-51-3** **3377-52-4**  
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 8CI) (CA INDEX NAME)



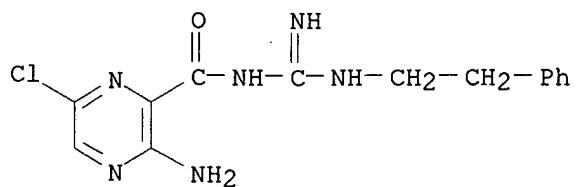
RN 3377-39-7 CAOLD  
 CN Pyrazinecarboxamide, 3-amino-N-(benzoylamidino)-6-chloro- (7CI, 8CI) (CA  
 INDEX NAME)



RN 3377-42-2 CAOLD  
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 (CA INDEX NAME)

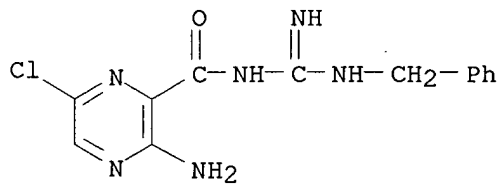


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 phenylethyl)amino]methyl]- (9CI) (CA INDEX NAME)



RN 3377-52-4 CAOLD

CN Pyrazinecarboxamide, 3-amino-6-chloro-N-[imino[(phenylmethyl)amino]methyl]-  
(9CI) (CA INDEX NAME)



L7 ANSWER 3 OF 3 CAOLD COPYRIGHT 2003 ACS on STN

AN CA62:14698f CAOLD

TI guanidines (substituted)

PA Merck & Co., Inc.

DT Patent

TI substituted guanidines

AU Cragoe, Edward J., Jr.

DT Patent

PATENT NO.	KIND	DATE
BE 639386		
1163-43-5	1163-44-6	1163-45-7
1163-46-8	1165-90-8	1166-01-4
1634-13-5	1634-15-7	1634-16-8
1636-56-2	2088-58-6	2093-13-2
2898-76-2	23697-94-1	

PI BE 639386

IT 1163-43-5 1163-44-6 1163-45-7

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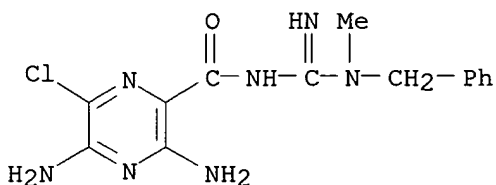
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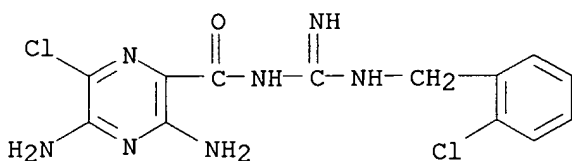
CN Pyrazinecarboxamide, 3,5-diamino-N-(N-benzyl-N-methylamidino)-6-chloro-, monohydrochloride (8CI) (CA INDEX NAME)



● HCl

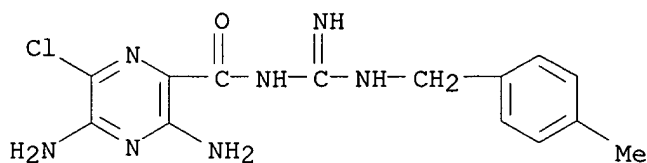
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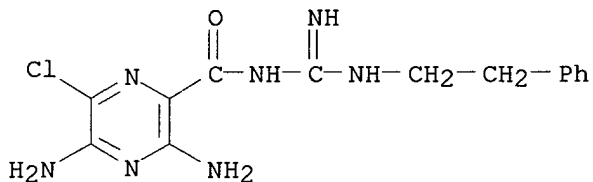
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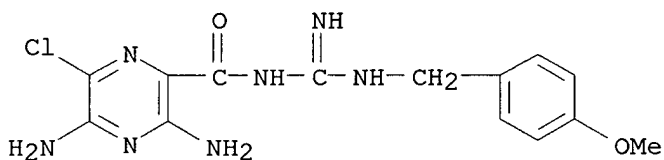
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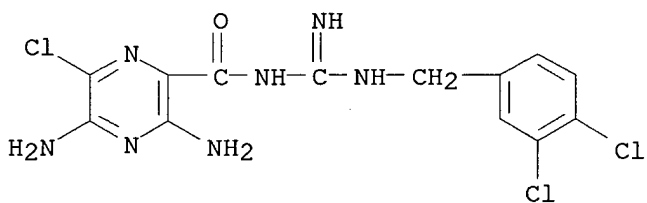
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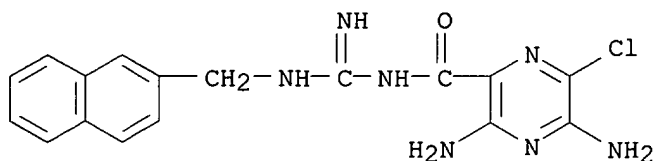
RN 1166-01-4 CAOLD

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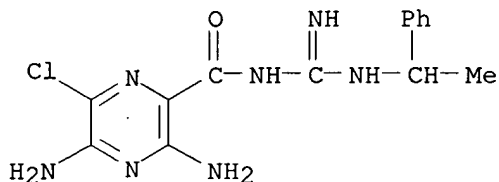
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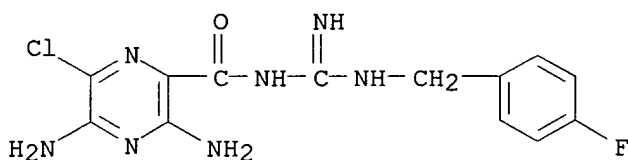
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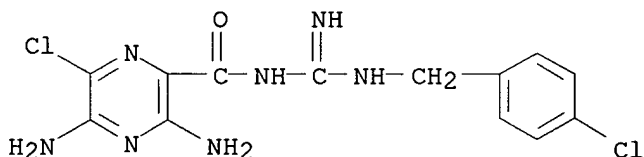
RN 1634-16-8 CAOLD

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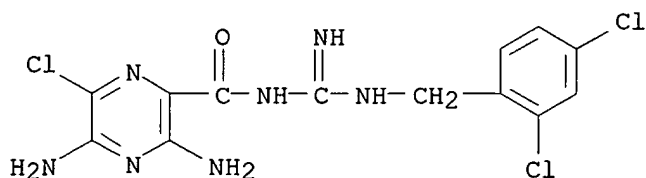
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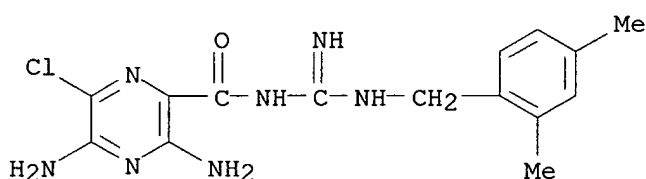
RN 2088-58-6 CAOLD

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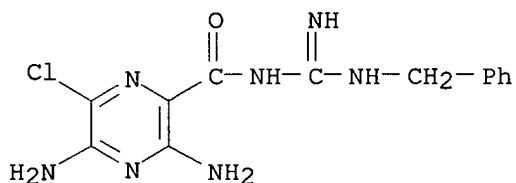


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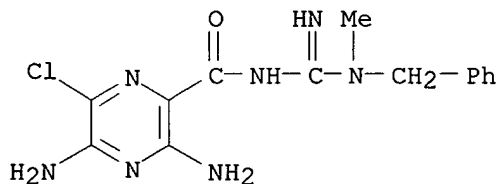
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CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[[[2,4-dimethylphenyl)methyl]amino]iminomethyl]- (9CI) (CA INDEX NAME)



RN 2898-76-2 CAOLD  
CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[imino[(phenylmethyl)amino]methyl]- (9CI) (CA INDEX NAME)



RN 23697-94-1 CAOLD  
CN Pyrazinecarboxamide, 3,5-diamino-N-(N-benzyl-N-methylamidino)-6-chloro-, hydrochloride (7CI, 8CI) (CA INDEX NAME)



●x HCl





=> file cplus  
'CPLUS' IS NOT A VALID FILE NAME  
SESSION CONTINUES IN FILE 'CAOLD'  
Enter "HELP FILE NAMES" at an arrow prompt (=) for a list of files  
that are available. If you have requested multiple files, you can  
specify a corrected file name or you can enter "IGNORE" to continue  
accessing the remaining file names entered.

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	9.46	193.92

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FILE COVERS 1907 - 25 Aug 2003 VOL 139 ISS 9  
FILE LAST UPDATED: 24 Aug 2003 (20030824/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> d his

(FILE 'HOME' ENTERED AT 19:02:13 ON 25 AUG 2003)

FILE 'REGISTRY' ENTERED AT 19:02:19 ON 25 AUG 2003

L1	STRUCTURE UPLOADED
L2	3 S L1
L3	83 S L1 FULL
L4	STRUCTURE UPLOADED
L5	17 S L4 FULL SUB=L3
L6	66 S L3 NOT L5

FILE 'CAOLD' ENTERED AT 19:04:47 ON 25 AUG 2003

L7	3 S L6
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FILE 'CAPLUS' ENTERED AT 19:07:13 ON 25 AUG 2003

=> s l6

L8	225 L6
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=> analyze rn l8

ENTER ANSWER NUMBER OR RANGE (1-):.

L9            ANALYZE L8 1- RN :    1728 TERMS

=> analyze hitrn l8

ENTER ANSWER NUMBER OR RANGE (1-):.

'HITRN' IS NOT A VALID FIELD CODE FOR FILE 'CAPLUS'

The following are valid field codes:

AB ----- Abstract Text  
AC ----- Patent Application Country  
AD ----- Patent Application Date  
AI ----- Patent Application Information  
AN ----- Accession Number  
AP ----- Patent Application Number  
APPS ----- Patent Application and Priority Number  
AU ----- Author or Patent Inventor  
AY ----- Patent Application Year  
CC ----- CA Classification Codes  
CK ----- Crossover Key  
CS ----- Corporate Source or Patent Assignee  
CS.DIV -- Corporate Source, Division  
CS.ORG -- Corporate Source, Organization Name  
CT ----- Controlled Term  
CYA ----- Country Name of Author  
DS ----- Designated States (Patents)  
DT ----- Document Type  
FAN ----- Family Accession Number  
FS ----- File Segment  
GENBANK - GENBANK Number  
IC ----- International Patent Classification (IPC)  
ICA ----- Additional (Supplementary) IPC  
ICI ----- Index (Complementary) IPC  
ICM ----- Main IPC  
ICS ----- Secondary IPC  
IN ----- Inventor Name  
ISN ----- International Standard (Document) Number  
ISSN----- ISSN  
IPC ----- International Patent Classifications  
IT ----- Index Entries  
JT ----- Journal Title  
LA ----- Language  
NCL----- National Patent Classification Code  
OS ----- Other Source  
PA ----- Patent Assignee  
PATS----- Patent Numbers  
PC ----- Patent Country  
PCS ----- Patent Countries  
PD ----- Publication Date  
PI ----- Patent Information  
PK ----- Kind of Patent  
PN ----- Patent Number  
PRAI ----- Patent Priority Information  
PRC ----- Patent Priority Country  
PRD ----- Patent Priority Date  
PRN ----- Patent Priority Number  
PRY ----- Patent Priority Year  
PY ----- Publication Year of Original Document  
RE ----- Reference  
REC ----- Reference Count  
RAN.CA -- Reference CA File Accession Number

RAN.CAPLUS --- Reference CAPLus File Accession Number  
RAN.MEDLINE -- Reference MEDLINE File Accession Number  
RAN.ALL ----- Reference Accession Numbers for All Files  
RIN ----- Reference Inventor  
RAU ----- Reference Author  
RWK ----- Reference Work  
RPG ----- Reference Page Number  
RPN ----- Reference Patent Number  
RPY ----- Reference Publication Year  
RVL ----- Reference Publication Volume  
RL ----- Roles  
RN ----- CAS Registry Number  
SO ----- Source  
ST ----- Supplementary Terms (CA Keywords)  
SX ----- Chemical Abstract Section Cross-Reference Code  
TI ----- Title of Document  
ENTER DISPLAY CODE (TI) OR ?:la  
L10           ANALYZE L8 1- LA :           6 TERMS

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	23.57	217.49

FILE 'REGISTRY' ENTERED AT 19:12:57 ON 25 AUG 2003  
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provided by InfoChem.

STRUCTURE FILE UPDATES: 24 AUG 2003 HIGHEST RN 572107-42-7  
DICTIONARY FILE UPDATES: 24 AUG 2003 HIGHEST RN 572107-42-7

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP  
PROPERTIES for more information. See STNote 27, Searching Properties  
in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> d his

(FILE 'HOME' ENTERED AT 19:02:13 ON 25 AUG 2003)

FILE 'REGISTRY' ENTERED AT 19:02:19 ON 25 AUG 2003

L1           STRUCTURE UPLOADED  
L2           3 S L1  
L3           83 S L1 FULL  
L4           STRUCTURE UPLOADED  
L5           17 S L4 FULL SUB=L3  
L6           66 S L3 NOT L5

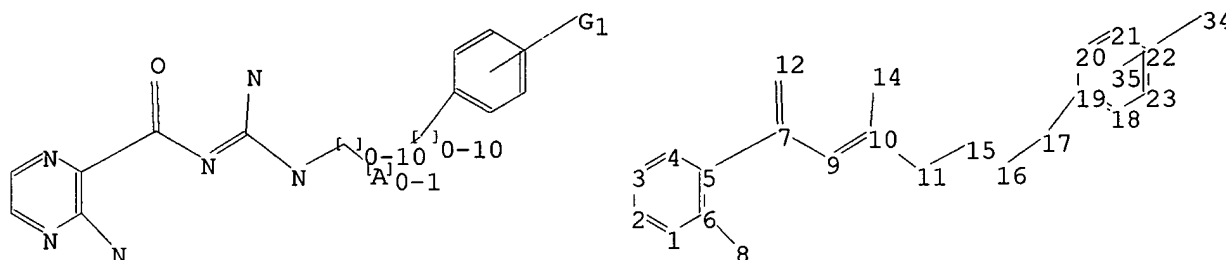
FILE 'CAOLD' ENTERED AT 19:04:47 ON 25 AUG 2003  
L7 3 S L6

FILE 'CAPLUS' ENTERED AT 19:07:13 ON 25 AUG 2003  
L8 225 S L6  
L9 ANALYZE L8 1- RN : 1728 TERMS  
L10 ANALYZE L8 1- LA : 6 TERMS

FILE 'REGISTRY' ENTERED AT 19:12:57 ON 25 AUG 2003

=>

Uploading C:\Program Files\Stnexp\Queries\10076571.str



chain nodes :

7 8 9 10 11 12 14 15 16 17 30 31 34

ring nodes :

1 2 3 4 5 6 18 19 20 21 22 23

chain bonds :

5-7 6-8 7-9 7-12 9-10 10-11 10-14 11-15 15-16 16-17 17-19 30-31

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 18-19 18-23 19-20 20-21 21-22 22-23

exact/norm bonds :

6-8 7-9 7-12 9-10 10-11 10-14 11-15 15-16 16-17 30-31

exact bonds :

5-7 17-19

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 18-19 18-23 19-20 20-21 21-22 22-23

isolated ring systems :

containing 1 :

G1:O,CH2, [\*1]

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS  
11:CLASS 12:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:Atom 19:Atom  
20:Atom 21:Atom 22:Atom 23:Atom 30:CLASS 31:CLASS 34:CLASS 35:CLASS

L11 STRUCTURE UPLOADED

=> s l11 subset = 16 full

FULL SUBSET SEARCH INITIATED 19:13:57 FILE 'REGISTRY'

FULL SUBSET SCREEN SEARCH COMPLETED - 66 TO ITERATE

100.0% PROCESSED 66 ITERATIONS

24 ANSWERS

SEARCH TIME: 00.00.01

L12 24 SEA SUB=L6 SSS FUL L11

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

35.70

253.19

FILE 'CAPLUS' ENTERED AT 19:14:14 ON 25 AUG 2003

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE COVERS 1907 - 25 Aug 2003 VOL 139 ISS 9

FILE LAST UPDATED: 24 Aug 2003 (20030824/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l12

L13 51 L12

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.42

253.61

FILE 'REGISTRY' ENTERED AT 19:14:53 ON 25 AUG 2003

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

10/076,571 Thomas McKenzie

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 24 AUG 2003 HIGHEST RN 572107-42-7  
DICTIONARY FILE UPDATES: 24 AUG 2003 HIGHEST RN 572107-42-7

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

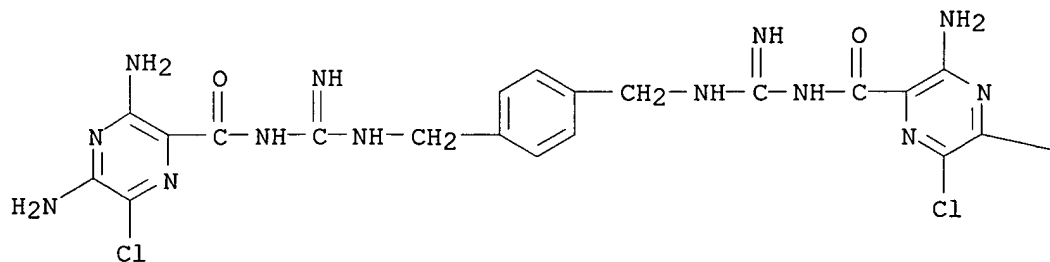
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP  
PROPERTIES for more information. See STNote 27, Searching Properties  
in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> d 112 1-24 ide cbib pi

L12 ANSWER 1 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 321554-73-8 REGISTRY  
 CN Pyrazinecarboxamide, N,N'-[1,4-phenylenebis(methyleneiminocarbonimidoyl)]bis[3,5-diamino-6-chloro-, dihydrobromide (9CI) (CA INDEX NAME)  
 MF C20 H22 Cl2 N14 O2 . 2 Br H  
 SR CA  
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

PAGE 1-A



● 2 HBr

PAGE 1-B

—NH<sub>2</sub>

1 REFERENCES IN FILE CA (1937 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 134:115971 Pyrazinoylguanidine derivatives as conjugates of sodium channel blockers and methods of using the same for hydrating mucosal surfaces. Boucher, Richard C., Jr. (University of North Carolina At Chapel Hill, USA). PCT Int. Appl. WO 2001005773 A1 20010125, 48 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 2000-US19775 20000719. PRIORITY: US 1999-PV144479 19990719.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001005773	A1	20010125	WO 2000-US19775	20000719
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LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,  
SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,  
YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,  
CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
EP 1196396 A1 20020417 EP 2000-948820 20000719  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO  
US 6475509 B1 20021105 US 2000-618978 20000719  
NO 2002000242 A 20020319 NO 2002-242 20020116  
US 2002165239 A1 20021107 US 2002-121913 20020412  
US 6607741 B2 20030819



L12 ANSWER 2 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN

RN 321554-70-5 REGISTRY

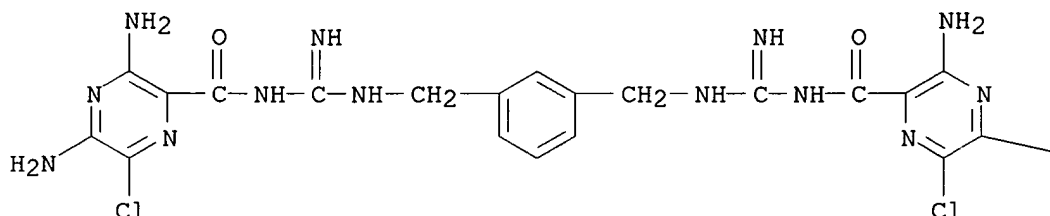
CN Pyrazinecarboxamide, N,N'-[1,3-phenylenebis(methyleneiminocarbonimidoyl)]bis[3,5-diamino-6-chloro-, dihydrobromide (9CI) (CA INDEX NAME)

MF C20 H22 Cl2 N14 O2 . 2 Br H

SR CA

LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

PAGE 1-A



● 2 HBr

PAGE 1-B

—NH<sub>2</sub>

1 REFERENCES IN FILE CA (1937 TO DATE)

1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 134:115971 Pyrazinoylguanidine derivatives as conjugates of sodium channel blockers and methods of using the same for hydrating mucosal surfaces. Boucher, Richard C., Jr. (University of North Carolina At Chapel Hill, USA). PCT Int. Appl. WO 2001005773 A1 20010125, 48 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 2000-US19775 20000719. PRIORITY: US 1999-PV144479 19990719.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,  
CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
EP 1196396 A1 20020417 EP 2000-948820 20000719  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO  
US 6475509 B1 20021105 US 2000-618978 20000719  
NO 2002000242 A 20020319 NO 2002-242 20020116  
US 2002165239 A1 20021107 US 2002-121913 20020412  
US 6607741 B2 20030819

L12 ANSWER 3 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN

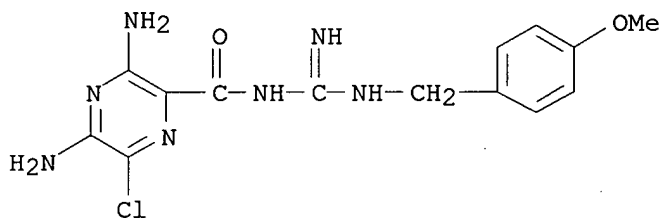
RN 224304-61-4 REGISTRY

CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[imino[[4-methoxyphenyl)methyl]amino]methyl]-, monohydrochloride (9CI) (CA INDEX NAME)

MF C14 H16 Cl N7 O2 . Cl H

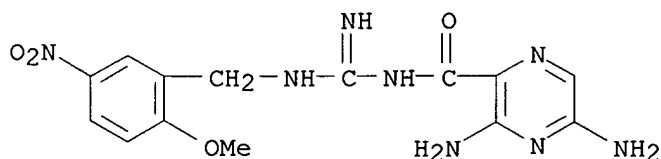
SR CAS Registry Services

CRN (1165-90-8)



● HCl

L12 ANSWER 4 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 153444-00-9 REGISTRY  
CN Pyrazinecarboxamide, 3,5-diamino-N-[imino[[2-methoxy-5-nitrophenyl)methyl]amino]methyl]- (9CI) (CA INDEX NAME)  
FS 3D CONCORD  
MF C14 H16 N8 O4  
SR CA  
LC STN Files: CA, CAPLUS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1937 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 120:156856 Utilization of amiloride analogs for characterization and labeling of the plasma membrane Na<sup>+</sup>/H<sup>+</sup> antiporter from *Dunaliella salina*. Katz, Adriana; Kleyman, Thomas R.; Pick, Uri (Department of Biochemistry, Weizmann Institute of Science, Rehovot, 76100, Israel). *Biochemistry*, 33(9), 2389-93 (English) 1994. CODEN: BICHAW. ISSN: 0006-2960.

L12 ANSWER 5 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN

RN 152306-15-5 REGISTRY

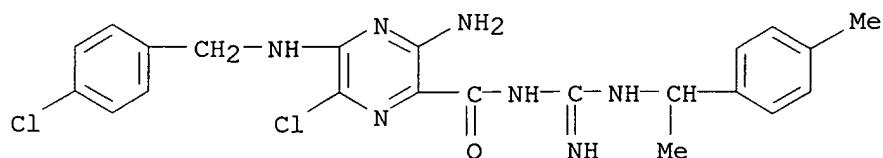
CN Pyrazinecarboxamide, 3-amino-6-chloro-5-[[[4-chlorophenyl)methyl]amino]-N-[imino[[1-(4-methylphenyl)ethyl]amino]methyl]- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C22 H23 Cl2 N7 O

SR CA

LC STN Files: CA, CAPLUS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1937 TO DATE)

1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 120:74264 Amiloride inhibition of angiogenesis in vitro.  
Alliegro, Mark C.; Alliegro, Mary Anne; Cragoe, Edward J., Jr.; Glaser,  
Bert M. (Retina Cent., St. Joseph Hosp., Baltimore, MD, 21284, USA).  
Journal of Experimental Zoology, 267(3), 245-52 (English) 1993. CODEN:  
JEZAO. ISSN: 0022-104X.

L12 ANSWER 6 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN

RN 144176-48-7 REGISTRY

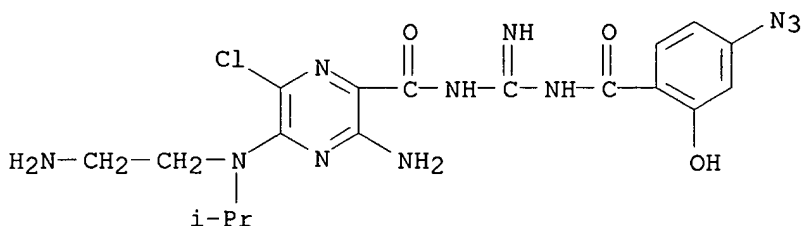
CN Pyrazinecarboxamide, 3-amino-5-[(2-aminoethyl)(1-methylethyl)amino]-N-[[[(4-azido-2-hydroxybenzoyl)amino]iminomethyl]-6-chloro- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C18 H22 Cl N11 O3

SR CA

LC STN Files: CA, CAPLUS, MEDLINE

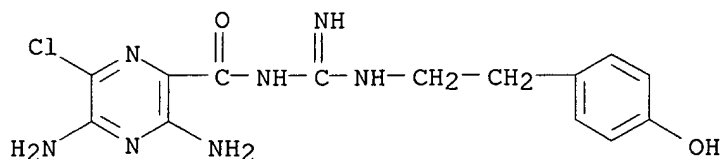


1 REFERENCES IN FILE CA (1937 TO DATE)

1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 117:205669 Novel amiloride analog allosterically modulates the  $\alpha_2$ -adrenergic receptor but does not inhibit sodium/hydrogen ion exchange. Wilson, Amy L.; Womble, Scott N.; Prakash, Chandra; Cragoe, E. J., Jr.; Blair, Ian A.; Limbird, Lee E. (Sch. Med., Vanderbilt Univ., Nashville, TN, 37332-6600, USA). Molecular Pharmacology, 42(2), 175-9 (English) 1992. CODEN: MOPMA3. ISSN: 0026-895X.

L12 ANSWER 7 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 134788-24-2 REGISTRY  
CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[[[2-(4-hydroxyphenyl)ethyl]amino]iminomethyl]- (9CI) (CA INDEX NAME)  
FS 3D CONCORD  
MF C14 H16 Cl N7 O2  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1937 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 115:41425 Reversal of intrinsic multidrug resistance in Chinese hamster ovary cells by amiloride analogs. Epand, R. F.; Epand, R. M.; Gupta, R. S.; Cragoe, E. J., Jr. (Health Sci. Cent., McMaster Univ., Hamilton, ON, L8N 3Z5, Can.). British Journal of Cancer, 63(2), 247-51 (English) 1991. CODEN: BJCAAI. ISSN: 0007-0920.

L12 ANSWER 8 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN

RN 133481-24-0 REGISTRY

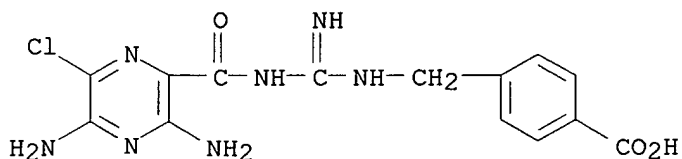
CN Benzoic acid, 4-[[[[(3,5-diamino-6-chloropyrazinyl)carbonyl]amino]iminomethyl]amino]methyl]- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C14 H14 Cl N7 O3

SR CA

LC STN Files: CA, CAPLUS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

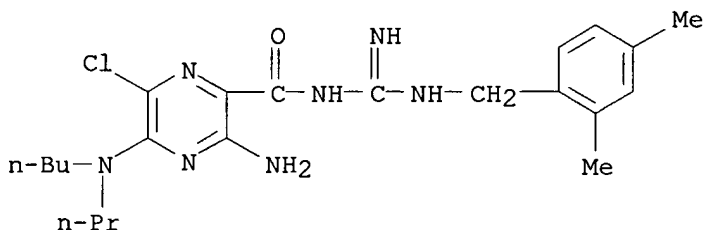
1 REFERENCES IN FILE CA (1937 TO DATE)

1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 114:199065 Distinct epitopes on amiloride. II. Variably restricted epitopes defined by monoclonal anti-amiloride antibodies. Kleyman, Thomas R.; Zebrowitz, Joseph R. (Dep. Med., Univ. Pennsylvania, Philadelphia, PA, 19104, USA). American Journal of Physiology, 260(2, Pt. 1), C271-C276 (English) 1991. CODEN: AJPHAP. ISSN: 0002-9513.



L12 ANSWER 9 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 128505-64-6 REGISTRY  
CN Pyrazinecarboxamide, 3-amino-5-(butylpropylamino)-6-chloro-N-[[[(2,4-dimethylphenyl)methyl]amino]iminomethyl]- (9CI) (CA INDEX NAME)  
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MF C22 H32 Cl N7 O  
SR CA  
LC STN Files: CA, CAPLUS

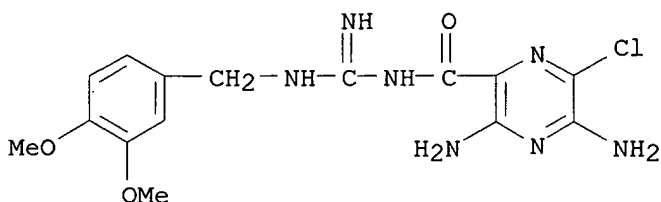


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1937 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 113:70716 Influence of amiloride derivatives on alpha-1 adrenergic receptor-induced contractions of the rabbit aorta. Lesburg, Charles; Li, Shauna; Cragoe, Edward J., Jr.; Deth, Richard C. (Coll. Pharm. Allied Health Profess., Northeastern Univ., Boston, MA, USA). Journal of Pharmacology and Experimental Therapeutics, 253(2), 530-6 (English) 1990. CODEN: JPETAB. ISSN: 0022-3565.

L12 ANSWER 10 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 127367-37-7 REGISTRY  
 CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[[[(3,4-dimethoxyphenyl)methyl]amino]iminomethyl]- (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C15 H18 Cl N7 O3  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1937 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 112:229739 Treating diseases characterized by hyperexcitability of neurons with pyrazinoylguanidines. Morad, Martin; Tang, Cha Min (University of Pennsylvania, USA). U.S. US 4894376 A 19900116, 11 pp. (English). CODEN: USXXAM. APPLICATION: US 1988-160835 19880226.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4894376	A	19900116	US 1988-160835	19880226

L12 ANSWER 11 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN

RN 127134-23-0 REGISTRY

CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[[[(2,4-dimethylphenyl)methyl]amino]iminomethyl]-, compd. with 2-propanol (1:1) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2-Propanol, compd. with 3,5-diamino-6-chloro-N-[[[(2,4-dimethylphenyl)methyl]amino]iminomethyl]pyrazinecarboxamide (1:1) (9CI)

MF C15 H18 Cl N7 O . C3 H8 O

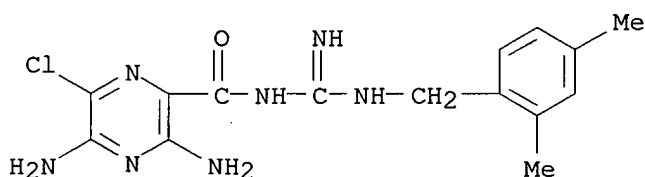
SR CA

LC STN Files: CA, CAPLUS

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CRN 2093-13-2

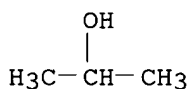
CMF C15 H18 Cl N7 O



CM 2

CRN 67-63-0

CMF C3 H8 O



2 REFERENCES IN FILE CA (1937 TO DATE)

2 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 112:210841 Inhibition of taste responses to sodium salts by epithelial sodium channel blockers in gerbil. Schiffman, Susan S.; Suggs, Mark S.; Cragoe, Edward J., Jr.; Erickson, Robert P. (Dep. Psychiatry, Duke Univ., Durham, NC, 27706, USA). Physiology & Behavior, 47(3), 455-9 (English) 1990. CODEN: PHBHA4. ISSN: 0031-9384.

REFERENCE 2: 112:210840 The effect of amiloride analogs on taste responses in gerbil. Schiffman, Susan S.; Frey, Amy E.; Suggs, Mark S.; Cragoe, Edward J., Jr.; Erickson, Robert P. (Dep. Psychol., Duke Univ., Durham, NC, 27706, USA). Physiology & Behavior, 47(3), 435-41 (English) 1990. CODEN: PHBHA4. ISSN: 0031-9384.

L12 ANSWER 12 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN

RN 126671-78-1 REGISTRY

CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[[ethyl[(2-methoxy-5-nitrophenyl)methyl]amino]iminomethyl]- (9CI) (CA INDEX NAME)

OTHER NAMES:

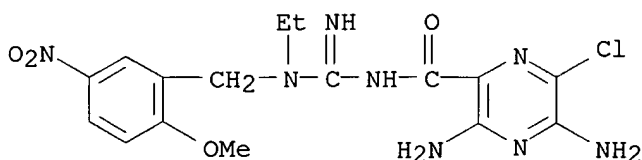
CN L 663128

FS 3D CONCORD

MF C16 H19 Cl N8 O4

SR CA

LC STN Files: CA, CAPLUS



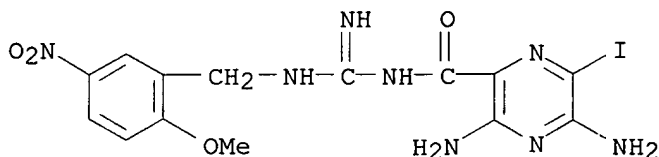
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1937 TO DATE)

1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 112:213213 Amiloride analogs inhibit L-type calcium channels and display calcium entry blocker activity. Garcia, Maria L.; King, V. Frank; Shevell, Judith L.; Slaughter, Robert S.; Suarez-Kurtz, Guilherme; Winkquist, Raymond J.; Kaczorowski, Gregory J. (Dep. Membr. Biochem. Biophys., Merck Inst. Ther. Res., Rahway, NJ, 07065, USA). Journal of Biological Chemistry, 265(7), 3763-71 (English) 1990. CODEN: JBCHA3. ISSN: 0021-9258.

L12 ANSWER 13 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 126671-77-0 REGISTRY  
CN Pyrazinecarboxamide, 3,5-diamino-N-[imino[(2-methoxy-5-nitrophenyl)methyl]amino]methyl]-6-iodo- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN L 663126  
FS 3D CONCORD  
MF C14 H15 I N8 O4  
SR CA  
LC STN Files: CA, CAPLUS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3 REFERENCES IN FILE CA (1937 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 120:156856 Utilization of amiloride analogs for characterization and labeling of the plasma membrane Na<sup>+</sup>/H<sup>+</sup> antiporter from *Dunaliella salina*. Katz, Adriana; Kleyman, Thomas R.; Pick, Uri (Department of Biochemistry, Weizmann Institute of Science, Rehovot, 76100, Israel). *Biochemistry*, 33(9), 2389-93 (English) 1994. CODEN: BICHAW. ISSN: 0006-2960.

REFERENCE 2: 119:23369 Structure-activity relations of amiloride derivatives, acting as antagonists of cation binding on Na<sup>+</sup>/K<sup>+</sup>-ATPase. David, Peer; Mayan, Haim; Cragoe, Edward J., Jr.; Karlsh, Steven J. D. (Dep. Biochem., Weizmann Inst. Sci., Rehovot, Israel). *Biochimica et Biophysica Acta*, 1146(1), 59-64 (English) 1993. CODEN: BBACAQ. ISSN: 0006-3002.

REFERENCE 3: 112:213213 Amiloride analogs inhibit L-type calcium channels and display calcium entry blocker activity. Garcia, Maria L.; King, V. Frank; Shevell, Judith L.; Slaughter, Robert S.; Suarez-Kurtz, Guilherme; Winquist, Raymond J.; Kaczorowski, Gregory J. (Dep. Membr. Biochem. Biophys., Merck Inst. Ther. Res., Rahway, NJ, 07065, USA). *Journal of Biological Chemistry*, 265(7), 3763-71 (English) 1990. CODEN: JBCHA3. ISSN: 0021-9258.

L12 ANSWER 14 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN

RN 122341-74-6 REGISTRY

CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[imino[[ (2-methoxy-5-nitrophenyl)methyl]amino]methyl]- (9CI) (CA INDEX NAME)

OTHER NAMES:

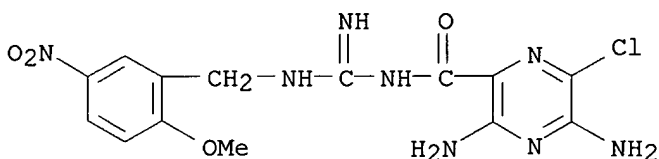
CN L 648865

FS 3D CONCORD

MF C14 H15 Cl N8 O4

SR CA

LC STN Files: CA, CAPLUS, MEDLINE



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

5 REFERENCES IN FILE CA (1937 TO DATE)

5 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 120:260539 Block by amiloride and its derivatives of mechanoelectrical transduction in outer hair cells of mouse cochlear cultures. Rusch, A.; Kros, C. J.; Richardson, G. P. (Sch. Biol. Sci., Univ. Sussex, Falmer/Brighton, BN1 9QG, UK). Journal of Physiology (Cambridge, United Kingdom), 474(1), 75-86 (English) 1994. CODEN: JPHYA7. ISSN: 0022-3751.

REFERENCE 2: 120:156856 Utilization of amiloride analogs for characterization and labeling of the plasma membrane Na<sup>+</sup>/H<sup>+</sup> antiporter from *Dunaliella salina*. Katz, Adriana; Kleyman, Thomas R.; Pick, Uri (Department of Biochemistry, Weizmann Institute of Science, Rehovot, 76100, Israel). Biochemistry, 33(9), 2389-93 (English) 1994. CODEN: BICHAW. ISSN: 0006-2960.

REFERENCE 3: 119:23369 Structure-activity relations of amiloride derivatives, acting as antagonists of cation binding on Na<sup>+</sup>/K<sup>+</sup>-ATPase. David, Peer; Mayan, Haim; Cragoe, Edward J., Jr.; Karlsh, Steven J. D. (Dep. Biochem., Weizmann Inst. Sci., Rehovot, Israel). Biochimica et Biophysica Acta, 1146(1), 59-64 (English) 1993. CODEN: BBACAQ. ISSN: 0006-3002.

REFERENCE 4: 112:213213 Amiloride analogs inhibit L-type calcium channels and display calcium entry blocker activity. Garcia, Maria L.; King, V. Frank; Shevell, Judith L.; Slaughter, Robert S.; Suarez-Kurtz, Guilherme; Winquist, Raymond J.; Kaczorowski, Gregory J. (Dep. Membr. Biochem. Biophys., Merck Inst. Ther. Res., Rahway, NJ, 07065, USA). Journal of Biological Chemistry, 265(7), 3763-71 (English) 1990. CODEN: JBCHA3. ISSN: 0021-9258.

REFERENCE 5: 111:127221 The cellular pool of sodium channels in the amphibian cell line A6 is not altered by mineralocorticoids. Analysis using a new photoactive amiloride analog in combination with

anti-amiloride antibodies. Kleyman, Thomas R.; Cragoe, Edward J., Jr.; Kraehenbuhl, Jean Pierre (Dep. Med., Columbia Univ., New York, NY, 10032, USA). Journal of Biological Chemistry, 264(20), 11995-2000 (English) 1989. CODEN: JBCHA3. ISSN: 0021-9258.

L12 ANSWER 15 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN

RN 118573-60-7 REGISTRY

CN Pyrazinecarboxamide, 3-amino-6-chloro-5-[[[4-chlorophenyl)methyl]amino]-N-  
[[[(2,4-dimethylphenyl)methyl]amino]iminomethyl]- (9CI) (CA INDEX NAME)

OTHER NAMES:

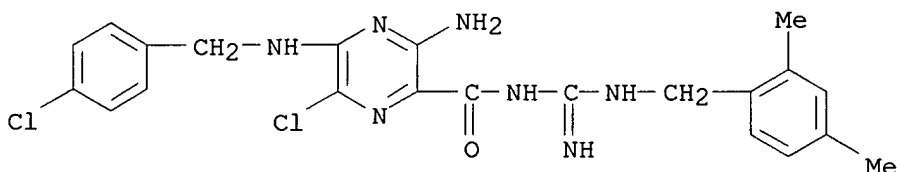
CN L 651525

FS 3D CONCORD

MF C22 H23 Cl2 N7 O

SR US National Library of Medicine

LC STN Files: CA, CAPLUS, MEDLINE, TOXCENTER, USPATFULL



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

16 REFERENCES IN FILE CA (1937 TO DATE)

16 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 126:246553 Inhibition by 5-N-(4-chlorobenzyl)-2',4'-dimethylbenzyl of Na<sup>+</sup>/Ca<sup>2+</sup> exchange and L-type Ca<sup>2+</sup> channels in isolated cardiomyocytes. Sharikabad, Mohammad Nouri; Cragoe, Edward J., Jr.; Broers, Odd (Division of Clinical Pharmacology and Toxicology, Clinical Chemistry Department, Ulleval University Hospital, Oslo, N-0407, Norway). Pharmacology & Toxicology (Copenhagen), 80(2), 57-61 (English) 1997. CODEN: PHTOEH. ISSN: 0901-9928. Publisher: Munksgaard.

REFERENCE 2: 121:245803 The effect of inhibitors of Na/H exchange and Na/Ca exchange on airway smooth muscle contractility. Knox, A. J.; Ajao, P. (Respiratory Med. Unit, City Hosp., Nottingham, NG5 1PB, UK). Pulmonary Pharmacology, 7(2), 99-102 (English) 1994. CODEN: PUPHEX. ISSN: 0952-0600.

REFERENCE 3: 120:3841 Pyrazine compounds and the measurement of cytosolic calcium. Kraut, Ricky P.; Greenberg, Arnold H.; Cragoe, Edward J., Jr.; Bose, Ratna (Manitoba Inst. Cell Biol., Univ. Manitoba, Winnipeg, MB, R3E 0W3, Can.). Analytical Biochemistry, 214(2), 413-19 (English) 1993. CODEN: ANBCA2. ISSN: 0003-2697.

REFERENCE 4: 118:32441 High-performance liquid chromatographic method for quantitating plasma levels of amiloride and its analogs. Alliegro, Mary Anne; Dyer, Kimberly D.; Cragoe, Edward J., Jr.; Glaser, Bert M.; Alliegro, Mark C. (Retina Cent., St. Joseph Hosp., Baltimore, MD, 21284, USA). Journal of Chromatography, 582(1-2), 217-23 (English) 1992. CODEN: JOCRAM. ISSN: 0021-9673.

REFERENCE 5: 117:184594 Amiloride derivatives as blockers of sodium/calcium exchange: effects on mechanical and electrical function of guinea pig myocardium. Wettwer, Erich; Himmel, Herbert; Ravens, Ursula (Dep. Pharmacol., Univ. Essen, Essen, D-4300/1, Germany). Pharmacology & Toxicology (Oxford, United Kingdom), 71(2), 95-102 (English) 1992. CODEN:



PHTOEH. ISSN: 0901-9928.

REFERENCE 6: 116:76385 Use of amiloride and other pyrazine derivatives for preventing or treating ocular neovascularization. Glaser, Bert M.; Varner, Hugh H. (Baltimore Biotech, Inc., USA). Eur. Pat. Appl. EP 451130 A2 19911009, 12 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE. (English). CODEN: EPXXDW. APPLICATION: EP 1991-870055 19910404. PRIORITY: US 1990-504584 19900405.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 451130	A2	19911009	EP 1991-870055	19910404
EP 451130	A3	19920805		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 07089859	A2	19950404	JP 1991-73220	19910405

REFERENCE 7: 115:223092 Amiloride analogs induce responses in isolated rat cardiovascular tissues by inhibition of sodium/calcium exchange. Brown, Lindsay; Cragoe, Edward J., Jr.; Abel, Keith C.; Manley, Simon W.; Bourke, John R. (Dep. Physiol. Pharmacol., Univ. Queensland, Brisbane, 4072, Australia). Naunyn-Schmiedeberg's Archives of Pharmacology, 344(2), 220-4 (English) 1991. CODEN: NSAPCC. ISSN: 0028-1298.

REFERENCE 8: 115:42513 Monovalent cation and amiloride analog modulation of adrenergic ligand binding to the unglycosylated  $\alpha 2B$ -adrenergic receptor subtype. Wilson, Amy L.; Seibert, Karen; Brandon, Suzanne; Cragoe, E. J., Jr.; Limbird, Lee E. (Sch. Med., Vanderbilt Univ., Nashville, TN, 37232, USA). Molecular Pharmacology, 39(4), 481-6 (English) 1991. CODEN: MOPMA3. ISSN: 0026-895X.

REFERENCE 9: 115:41425 Reversal of intrinsic multidrug resistance in Chinese hamster ovary cells by amiloride analogs. Epand, R. F.; Epand, R. M.; Gupta, R. S.; Cragoe, E. J., Jr. (Health Sci. Cent., McMaster Univ., Hamilton, ON, L8N 3Z5, Can.). British Journal of Cancer, 63(2), 247-51 (English) 1991. CODEN: BJCAAI. ISSN: 0007-0920.

REFERENCE 10: 113:228530 Stimulation of calcium uptake into epididymal bull spermatozoa by analogs of amiloride. Breitbart, Haim; Cragoe, Edward J.; Lardy, Henry A. (Dep. Life Sci., Bar-Ilan Univ., Ramat-Gan, 52900, Israel). European Journal of Biochemistry, 192(2), 529-35 (English) 1990. CODEN: EJBCAI. ISSN: 0014-2956.

L12 ANSWER 16 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN

RN 117241-68-6 REGISTRY

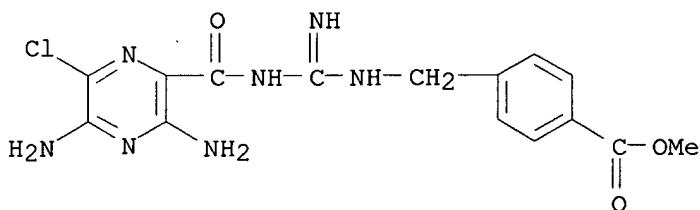
CN Benzoic acid, 4-[[[[(3,5-diamino-6-chloropyrazinyl)carbonyl]amino]iminomethyl]amino]methyl]-, methyl ester (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C15 H16 Cl N7 O3

SR CA

LC STN Files: CA, CAPLUS



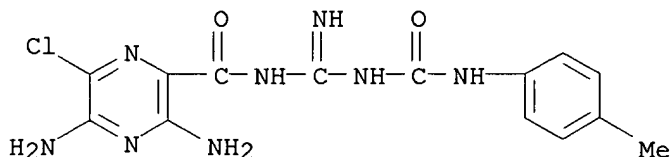
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1937 TO DATE)

1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 109:183053 Amiloride analogs cause endothelium-dependent relaxation in the canine coronary artery in vitro: possible role of sodium/calcium exchange. Cocks, T. M.; Little, P. J.; Angus, J. A.; Cragoe, E. J., Jr. (Baker Med. Res. Inst., Prahran, 3181, Australia). British Journal of Pharmacology, 95(1), 67-76 (English) 1988. CODEN: BJPCBM. ISSN: 0007-1188.

L12 ANSWER 17 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 67376-93-6 REGISTRY  
 CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[imino[[[4-methylphenyl)amino]carbonyl]amino]methyl]- (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C14 H15 Cl N8 O2  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL  
 (\*File contains numerically searchable property data)



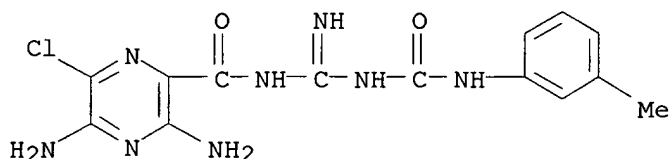
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1 REFERENCES IN FILE CA (1937 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 89:109585 Pyrazinecarboxamides. Cragoe, Edward J., Jr.; Woltersdorf, Otto W., Jr.; Habecker, Charles N. (Merck and Co., Inc., USA). U.S. US 4085211 19780418, 15 pp. (English). CODEN: USXXAM. APPLICATION: US 1976-722442 19760913.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4085211	A	19780418	US 1976-722442	19760913
	DK 7605314	A	19770616	DK 1976-5314	19761125
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	CH 630369	A	19820615	CH 1976-15660	19761213
	BE 849379	A1	19770614	BE 1976-173235	19761214
	ZA 7607431	A	19780726	ZA 1976-7431	19761214
	JP 52106877	A2	19770907	JP 1976-149889	19761215
	JP 62038350	B4	19870817		
	ES 465742	A1	19781001	ES 1978-465742	19780103

L12 ANSWER 18 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 67376-91-4 REGISTRY  
 CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[imino[[[3-methylphenyl)amino]carbonyl]amino]methyl]- (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C14 H15 Cl N8 O2  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL  
 (\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1937 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 89:109585 Pyrazinecarboxamides. Cragoe, Edward J., Jr.; Woltersdorf, Otto W., Jr.; Habecker, Charles N. (Merck and Co., Inc., USA). U.S. US 4085211 19780418, 15 pp. (English). CODEN: USXXAM. APPLICATION: US 1976-722442 19760913.

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	JP 52106877	A2	19770907	JP 1976-149889	19761215
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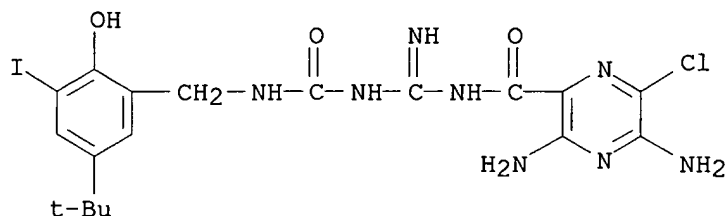
L12 ANSWER 19 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN

RN 64077-96-9 REGISTRY

CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[[[[[5-(1,1-dimethylethyl)-2-hydroxy-3-iodophenyl]methyl]amino]carbonyl]amino]iminomethyl]- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C18 H22 Cl I N8 O3

LC STN Files: BEILSTEIN\*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL  
(\*File contains numerically searchable property data)

2 REFERENCES IN FILE CA (1937 TO DATE)

2 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 89:109585 Pyrazinecarboxamides. Cragoe, Edward J., Jr.; Woltersdorf, Otto W., Jr.; Habecker, Charles N. (Merck and Co., Inc., USA). U.S. US 4085211 19780418, 15 pp. (English). CODEN: USXXAM. APPLICATION: US 1976-722442 19760913.

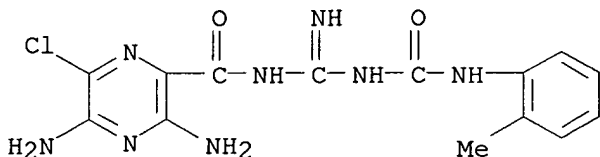
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	SE 7613289	A	19770616	SE 1976-13289	19761126
	SE 431452	B	19840206		
	SE 431452	C	19840517		
	NL 7613276	A	19770617	NL 1976-13276	19761129
	AU 7620181	A1	19780608	AU 1976-20181	19761202
	AU 511429	B2	19800821		
	ES 454160	A1	19780301	ES 1976-454160	19761210
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	GB 1527297	A	19781004	GB 1976-51940	19761213
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	ZA 7607431	A	19780726	ZA 1976-7431	19761214
	JP 52106877	A2	19770907	JP 1976-149889	19761215
	JP 62038350	B4	19870817		
	ES 465742	A1	19781001	ES 1978-465742	19780103

REFERENCE 2: 87:117906 Pyrazinecarboxamides. Cragoe, Edward Jethro, Jr.; Woltersdorf, Otto William, Jr.; Habecker, Charles Newcomer (Merck and Co., Inc., USA). Ger. Offen. DE 2656374 19770616, 71 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1976-2656374 19761213.

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ES 465742	A1	19781001	ES 1978-465742	19780103

L12 ANSWER 20 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN  
 RN 64077-56-1 REGISTRY  
 CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[imino[[[(2-methylphenyl)amino]carbonyl]amino]methyl]- (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C14 H15 Cl N8 O2  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, USPATFULL  
 (\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1937 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 89:109585 Pyrazinecarboxamides. Cragoe, Edward J., Jr.; Woltersdorf, Otto W., Jr.; Habecker, Charles N. (Merck and Co., Inc., USA). U.S. US 4085211 19780418, 15 pp. (English). CODEN: USXXAM. APPLICATION: US 1976-722442 19760913.

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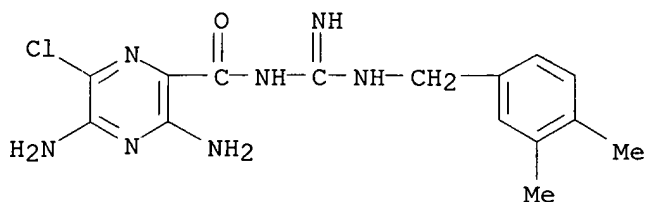
REFERENCE 2: 87:117906 Pyrazinecarboxamides. Cragoe, Edward Jethro, Jr.; Woltersdorf, Otto William, Jr.; Habecker, Charles Newcomer (Merck and Co., Inc., USA). Ger. Offen. DE 2656374 19770616, 71 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1976-2656374 19761213.

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ES 465742	A1	19781001	ES 1978-465742	19780103



L12 ANSWER 21 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN  
RN 23765-86-8 REGISTRY  
CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[(3,4-dimethylbenzyl)amidino]-  
(8CI) (CA INDEX NAME)  
FS 3D CONCORD  
MF C15 H18 Cl N7 O  
LC STN Files: BEILSTEIN\*, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1937 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

REFERENCE 1: 71:91530 (3,5-Diamino-6-halopyrazinoyl)guanidines. Pollak,  
Peter I.; Tull, Roger J. (Merck and Co., Inc.). Fr. FR 1528217 19680607,  
9 pp. (French). CODEN: FRXXAK. PRIORITY: US 19660825.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1528217		19680607		

L12 ANSWER 22 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN

RN 2093-13-2 REGISTRY

CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[[[(2,4-dimethylphenyl)methyl]amino]iminomethyl]- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[(2,4-dimethylbenzyl)amidino]- (7CI, 8CI)

OTHER NAMES:

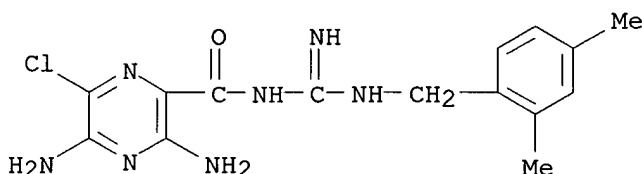
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FS 3D CONCORD

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CI COM

LC STN Files: BEILSTEIN\*, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, TOXCENTER, USPATFULL  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

23 REFERENCES IN FILE CA (1937 TO DATE)

23 REFERENCES IN FILE CAPLUS (1937 TO DATE)

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 123:140200 Non-selective effects of amiloride and its analogs on ion transport systems and their cytotoxicities in cardiac myocytes. Murata, Yosuke; Harada, Kengo; Nakajima, Fumio; Maruo, Joji; Morita, Tominori (Dep. Biol., New Drug Res. Lab., Osaka, 534, Japan). Japanese Journal of Pharmacology, 68(3), 279-85 (English) 1995. CODEN: JJPAAZ. ISSN: 0021-5198. Publisher: Japanese Pharmacological Society.

REFERENCE 2: 115:223092 Amiloride analogs induce responses in isolated rat cardiovascular tissues by inhibition of sodium/calcium exchange. Brown, Lindsay; Cragoe, Edward J., Jr.; Abel, Keith C.; Manley, Simon W.; Bourke, John R. (Dep. Physiol. Pharmacol., Univ. Queensland, Brisbane, 4072, Australia). Naunyn-Schmiedeberg's Archives of Pharmacology, 344(2), 220-4 (English) 1991. CODEN: NSAPCC. ISSN: 0028-1298.

REFERENCE 3: 114:178103 Inhibition of sodium-calcium and sodium-proton exchangers by amiloride congeners in arterial muscle cells. Smith, Jeffrey Bingham; Lyu, Rong Ming; Smith, Lucinda (Sch. Med., Univ. Alabama, Birmingham, AL, 35294, USA). Biochemical Pharmacology, 41(4), 601-9 (English) 1991. CODEN: BCPA6. ISSN: 0006-2952.

REFERENCE 4: 114:17865 Sodium-calcium exchange activity in central nerve endings. II. Relationship between pharmacological blockade by amiloride analogs and dopamine release from tuberoinfundibular hypothalamic neurons. Tagliatela, Maurizio; Canzoniero, Lorella M. T.; Cragoe, Edward J., Jr.; Di Renzo, Gianfranco; Annunziato, Lucio (2nd Sch. Med., Univ. Naples, Naples, 80131, Italy). Molecular Pharmacology, 38(3), 393-400 (English)

1990. CODEN: MOPMA3. ISSN: 0026-895X.

REFERENCE 5: 113:228530 Stimulation of calcium uptake into epididymal bull spermatozoa by analogs of amiloride. Breitbart, Haim; Cragoe, Edward J.; Lardy, Henry A. (Dep. Life Sci., Bar-Ilan Univ., Ramat-Gan, 52900, Israel). European Journal of Biochemistry, 192(2), 529-35 (English) 1990. CODEN: EJBCAI. ISSN: 0014-2956.

REFERENCE 6: 113:145079 Amiloride analogs induce the phosphorylation of elongation factor-2 in vascular endothelial cells. Demolle, D.; Lecomte, M.; Bouterin-Falson, O.; Cragoe, E. J., Jr.; Nairn, A. C.; Boeynaems, J. M. (Sch. Med., Univ. Libre Bruxelles, Brussels, Belg.). Molecular Pharmacology, 37(6), 827-32 (English) 1990. CODEN: MOPMA3. ISSN: 0026-895X.

REFERENCE 7: 113:74174 Influence of isolation media on synaptosomal properties: intracellular pH, pCa, and calcium uptake. Bandeira-Duarte, C.; Carvalho, C. A. M.; Cragoe, E. J., Jr.; Carvalho, A. P. (Inst. Histol. Embriol., Univ. Coimbra, Coimbra, 3049, Port.). Neurochemical Research, 15(3), 313-20 (English) 1990. CODEN: NEREDZ. ISSN: 0364-3190.

REFERENCE 8: 113:70716 Influence of amiloride derivatives on alpha-1 adrenergic receptor-induced contractions of the rabbit aorta. Lesburg, Charles; Li, Shauna; Cragoe, Edward J., Jr.; Deth, Richard C. (Coll. Pharm. Allied Health Profess., Northeastern Univ., Boston, MA, USA). Journal of Pharmacology and Experimental Therapeutics, 253(2), 530-6 (English) 1990. CODEN: JPETAB. ISSN: 0022-3565.

REFERENCE 9: 109:183053 Amiloride analogs cause endothelium-dependent relaxation in the canine coronary artery in vitro: possible role of sodium/calcium exchange. Cocks, T. M.; Little, P. J.; Angus, J. A.; Cragoe, E. J., Jr. (Baker Med. Res. Inst., Prahran, 3181, Australia). British Journal of Pharmacology, 95(1), 67-76 (English) 1988. CODEN: BJPCBM. ISSN: 0007-1188.

REFERENCE 10: 109:104425 Paradoxical effects of amiloride analogs on protein phosphorylation and serotonin release induced by agonists in human platelets. Yoshida, Kenichi; Matoba, Ryoji; Cragoe, Edward J., Jr.; Nachmias, Vivianne T. (Med. Sch., Osaka Univ., Osaka, 530, Japan). Biochemical and Biophysical Research Communications, 154(1), 101-7 (English) 1988. CODEN: BBRCA9. ISSN: 0006-291X.

L12 ANSWER 23 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN

RN 1165-90-8 REGISTRY

CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[imino[[4-methoxyphenyl)methyl]amino]methyl]- (9CI) (CA INDEX NAME)

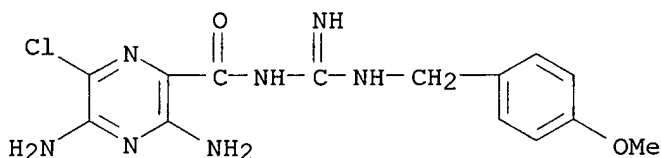
OTHER CA INDEX NAMES:

CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[(p-methoxybenzyl)amidino]- (7CI, 8CI)

FS 3D CONCORD

MF C14 H16 Cl N7 O2

CI COM

LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS, IFICDB, IFIPAT, IFIUDB  
(\*File contains numerically searchable property data)

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

11 REFERENCES IN FILE CA (1937 TO DATE)

11 REFERENCES IN FILE CAPLUS (1937 TO DATE)

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 74:42387 Diuretic and natriuretic pyrazinoylguanidines from pyrazinoylureas. Tull, Roger J.; Pollak, Peter I. (Merck and Co., Inc.). U.S. US 3539569 19701110, 4 pp. (English). CODEN: USXXAM. APPLICATION: US 1968-754451 19680821.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3539569	A	19701110	US 1968-754451	19680821
	NL 6910945	A	19700224	NL 1969-10945	19690716

REFERENCE 2: 72:43731 Diuretic and natriuretic pyrazinoylguanidines. Cragoe, Edward J., Jr.; Jones, James Holden (Merck and Co., Inc.). Fr. FR 1559541 19690307, 22 pp. (French). CODEN: FRXXAK. PRIORITY: US 19670413.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 1559541		19690307		

REFERENCE 3: 71:112983 (3,5-Diamino-6-halopyrazinoyl) guanidines. Pollak, Peter I.; Tull, Roger J. (Merck and Co., Inc.). Fr. FR 1525692 19680517, 8 pp. (French). CODEN: FRXXAK. PRIORITY: US 19660825.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 1525692		19680517		

REFERENCE 4: 71:91530 (3,5-Diamino-6-halopyrazinoyl)guanidines. Pollak, Peter I.; Tull, Roger J. (Merck and Co., Inc.). Fr. FR 1528217 19680607, 9 pp. (French). CODEN: FRXXAK. PRIORITY: US 19660825.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI FR 1528217 19680607

REFERENCE 5: 71:81411 (3,5-Diamino-6-halopyrazinoyl and -pyrazinamido)guanidines. Pollak, Peter I.; Tull, Roger J. (Merck and Co., Inc.). Fr. FR 1525671 19680517, 6 pp. (French). CODEN: FRXXAK. PRIORITY: US 19660825.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI FR 1525671		19680517		

REFERENCE 6: 71:39006 1-(2-Pyrazinylcarbonyl)guanidines. Pollak, Peter I.; Tull, Roger J. (Merck and Co., Inc.). Brit. GB 1145934 19690319, 6 pp. (English). CODEN: BRXXAA. PRIORITY: US 19660825.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI GB 1145934		19690319		

REFERENCE 7: 70:96820 Pyrazinoylguanidine and pyrazinamidoguanidine. Pollak, Peter I.; Tull, Roger J. (Merck and Co., Inc.). U.S. US 3432502 19690311, 4 pp. (English). CODEN: USXXAM. APPLICATION: US 1966-574909 19660825.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3432502	A	19690311	US 1966-574909	19660825
NL 6707563	A	19680226	NL 1967-7563	19670531
DK 115771	B	19691110	DK 1967-2864	19670601
BE 699435	A	19671204	BE 1967-699435	19670602
ES 341321	A1	19681016	ES 1967-341321	19670602
CH 484161	A	19700115	CH 1967-484161	19670607
GB 1184709	A	19700318	GB 1967-1184709	19670607

REFERENCE 8: 69:36172 (3-Amino-2-pyrazinecarbonyl)guanidines. Cragoe, Edward J., Jr. (Merck and Co., Inc.). U.S. US 3313813 19670411, 26 pp. (English). CODEN: USXXAM. APPLICATION: US 19621030.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3313813		19670411	US	19621030

REFERENCE 9: 68:49653 Derivatives of pyrazine. Pollak, Peter I.; Tull, Roger J. (Merck and Co., Inc.). U.S. US 3328404 19670627, 4 pp. (English). CODEN: USXXAM. APPLICATION: US 19660825.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3328404		19670627	US	19660825

REFERENCE 10: 66:37887 Pyrazine diuretics. II. N-amidino-3-amino-5-substituted 6-halopyrazinecarboxamides. Cragoe, Edward J., Jr.; Woltersdorf, Otto W., Jr.; Bicking, John B.; Kwong, Sara F.; Jones, James Holden (Div. of Merck and Co., Inc., Merck Sharp and Dohme Res. Labs., West Point, PA, USA). Journal of Medicinal Chemistry, 10(1), 66-75 (English) 1967. CODEN: JMCMAR. ISSN: 0022-2623.

L12 ANSWER 24 OF 24 REGISTRY COPYRIGHT 2003 ACS on STN

RN 1163-45-7 REGISTRY

CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[imino[(4-methylphenyl)methyl]amino]methyl]- (9CI) (CA INDEX NAME)

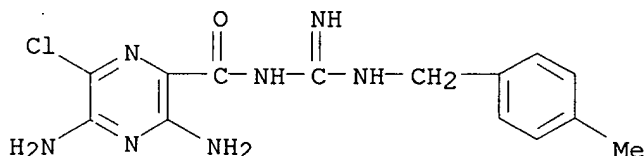
OTHER CA INDEX NAMES:

CN Pyrazinecarboxamide, 3,5-diamino-6-chloro-N-[(p-methylbenzyl)amidino]- (7CI, 8CI)

FS 3D CONCORD

MF C14 H16 Cl N7 O

LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS, IFICDB, IFIPAT, IFIUDB  
(\*File contains numerically searchable property data)



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14 REFERENCES IN FILE CA (1937 TO DATE)

14 REFERENCES IN FILE CAPLUS (1937 TO DATE)

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 103:212338 Phenamil: an irreversible inhibitor of sodium channels in the toad urinary bladder. Garvin, Jeffrey L.; Simon, Sidney A.; Cragoe, Edward J., Jr.; Mandel, Lazaro J. (Med. Cent., Duke Univ., Durham, NC, 27710, USA). Journal of Membrane Biology, 87(1), 45-54 (English) 1985. CODEN: JMBBBO. ISSN: 0022-2631.

REFERENCE 2: 102:142791 Inhibition of sodium-calcium exchange in pituitary plasma membrane vesicles by analogs of amiloride. Kaczorowski, Gregory J.; Barros, Francisco; Dethmers, Judy K.; Trumble, Mayme J.; Cragoe, Edward J., Jr. (Dep. Biochem., Merck Inst. Ther. Res., Rahway, NJ, 07065, USA). Biochemistry, 24(6), 1394-403 (English) 1985. CODEN: BICHAW. ISSN: 0006-2960.

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Cragoe, Edward J., Jr.; Jones, James Holden (Merck and Co., Inc.). Fr. FR 1559541 19690307, 22 pp. (French). CODEN: FRXXAK. PRIORITY: US 19670413.

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	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 1528217		19680607		

REFERENCE 8: 71:81411 (3,5-Diamino-6-halopyrazinoyl and -pyrazinamido)guanidines. Pollak, Peter I.; Tull, Roger J. (Merck and Co., Inc.). Fr. FR 1525671 19680517, 6 pp. (French). CODEN: FRXXAK. PRIORITY: US 19660825.

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 1525671		19680517		

REFERENCE 9: 71:39006 1-(2-Pyrazinylcarbonyl)guanidines. Pollak, Peter I.; Tull, Roger J. (Merck and Co., Inc.). Brit. GB 1145934 19690319, 6 pp. (English). CODEN: BRXXAA. PRIORITY: US 19660825.

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	NL 6707563	A	19680226	NL 1967-7563	19670531
	DK 115771	B	19691110	DK 1967-2864	19670601
	BE 699435	A	19671204	BE 1967-699435	19670602
	ES 341321	A1	19681016	ES 1967-341321	19670602
	CH 484161	A	19700115	CH 1967-484161	19670607
	GB 1184709	A	19700318	GB 1967-1184709	19670607

10/076,571 Thomas McKenzie

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